SEQUENCE TABLES

<110> JENAPHARM GmbH & Co. KG

<120> Method for Determining Hormonal Effects of Substances

<130> Pat 3684/11

<140>
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<160> 7

<170> PatentIn Ver. 2.1

<210> 1
<211> 2390
<212> DNA
<213> Homo sapiens

<220> EWS
<221> CDS
<222> (44)..(2011)

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                                                      1

gat tac agt acc tat agc caa gct gca gcg cag cag ggc tac agt gct   103
Asp Tyr Ser Thr Tyr Ser Gln Ala Ala Ala Gln Gln Gly Tyr Ser Ala
  5   10   15   20

tac acc gcc cag ccc act caa gga tat gca cag acc acc cag gca tat   151
Tyr Thr Ala Gln Pro Thr Gln Gly Tyr Ala Gln Thr Thr Gln Ala Tyr
                 25   30   35

ggg caa caa agc tat gga acc tat gga cag ccc act gat gtc agc tat   199
Gly Gln Gln Ser Tyr Gly Thr Tyr Gly Gln Pro Thr Asp Val Ser Tyr
             40   45   50

acc cag gct cag acc act gca acc tat ggg cag acc gcc tat gca act   247
Thr Gln Ala Gln Thr Thr Ala Thr Tyr Gly Gln Thr Ala Tyr Ala Thr
                 55   60   65

tct tat gga cag cct ccc act ggt tat act act cca act gcc ccc cag   295
Ser Tyr Gly Gln Pro Pro Thr Gly Tyr Thr Thr Pro Thr Ala Pro Gln
             70   75   80

gca tac agc cag cct gtc cag ggg tat ggc act ggt gct tat gat acc   343
Ala Tyr Ser Gln Pro Val Gln Gly Tyr Gly Thr Gly Ala Tyr Asp Thr
  85   90   95   100

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acc act gct aca gtc acc acc acc cag gcc tcc tat gca gct cag tct        391
Thr Thr Ala Thr Val Thr Thr Thr Gln Ala Ser Tyr Ala Ala Gln Ser
                105                 110                 115
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5
  gca tat ggc act cag cct gct tat cca gcc tat ggg cag cag cca gca       439
  Ala Tyr Gly Thr Gln Pro Ala Tyr Pro Ala Tyr Gly Gln Gln Pro Ala
                120                 125                 130
```

```
10 gcc act gca cct aca aga ccg cag gat gga aac aag ccc act gag act      487
   Ala Thr Ala Pro Thr Arg Pro Gln Asp Gly Asn Lys Pro Thr Glu Thr
                 135                 140                 145
```

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   agt caa cct caa tct agc aca ggg ggt tac aac cag ccc agc cta gga      535
15 Ser Gln Pro Gln Ser Ser Thr Gly Gly Tyr Asn Gln Pro Ser Leu Gly
              150                 155                 160
```

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   tat gga cag agt aac tac agt tat ccc cag gta cct ggg agc tac ccc      583
20 Tyr Gly Gln Ser Asn Tyr Ser Tyr Pro Gln Val Pro Gly Ser Tyr Pro
   165                 170                 175                 180
```

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   atg cag cca gtc act gca cct cca tcc tac cct cct acc agc tat tcc      631
   Met Gln Pro Val Thr Ala Pro Pro Ser Tyr Pro Pro Thr Ser Tyr Ser
25                 185                 190                 195
```

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   tct aca cag ccg act agt tat gat cag agc agt tac tct cag cag aac      679
   Ser Thr Gln Pro Thr Ser Tyr Asp Gln Ser Ser Tyr Ser Gln Gln Asn
                 200                 205                 210
30
   acc tat ggg caa ccg agc agc tat gga cag cag agt agc tat ggt caa      727
   Thr Tyr Gly Gln Pro Ser Ser Tyr Gly Gln Gln Ser Ser Tyr Gly Gln
                 215                 220                 225
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35 caa agc agc tat ggg cag cag cct ccc act agt tac cca ccc caa act      775
   Gln Ser Ser Tyr Gly Gln Gln Pro Pro Thr Ser Tyr Pro Pro Gln Thr
              230                 235                 240
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   gga tcc tac agc caa gct cca agt caa tat agc caa cag agc agc agc      823
40 Gly Ser Tyr Ser Gln Ala Pro Ser Gln Tyr Ser Gln Gln Ser Ser Ser
   245                 250                 255                 260
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   tac ggg cag cag agt tca ttc cga cag gac cac ccc agt agc atg ggt      871
   Tyr Gly Gln Gln Ser Ser Phe Arg Gln Asp His Pro Ser Ser Met Gly
45                 265                 270                 275
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   gtt tat ggg cag gag tct gga gga ttt tcc gga cca gga gag aac cgg      919
   Val Tyr Gly Gln Glu Ser Gly Gly Phe Ser Gly Pro Gly Glu Asn Arg
                 280                 285                 290
50
   agc atg agt ggc cct gat aac cgg ggc agg gga aga ggg gga ttt gat      967
   Ser Met Ser Gly Pro Asp Asn Arg Gly Arg Gly Arg Gly Gly Phe Asp
                 295                 300                 305
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55 cgt gga ggc atg agc aga ggt ggg cgg gga gga gga cgc ggt gga atg     1015
   Arg Gly Gly Met Ser Arg Gly Gly Arg Gly Gly Gly Arg Gly Gly Met
                 310                 315                 320
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    ggc agc gct gga gag cga ggt ggc ttc aat aag cct ggt gga ccc atg   1063
    Gly Ser Ala Gly Glu Arg Gly Gly Phe Asn Lys Pro Gly Gly Pro Met
    325             330             335             340
5
    gat gaa gga cca gat ctt gat cta ggc cca cct gta gat cca gat gaa   1111
    Asp Glu Gly Pro Asp Leu Asp Leu Gly Pro Pro Val Asp Pro Asp Glu
                    345             350             355

10  gac tct gac aac agt gca att tat gta caa gga tta aat gac agt gtg   1159
    Asp Ser Asp Asn Ser Ala Ile Tyr Val Gln Gly Leu Asn Asp Ser Val
                    360             365             370

    act cta gat gat ctg gca gac ttc ttt aag cag tgt ggg gtt gtt aag   1207
15  Thr Leu Asp Asp Leu Ala Asp Phe Phe Lys Gln Cys Gly Val Val Lys
                375             380             385

    atg aac aag aga act ggg caa ccc atg atc cac atc tac ctg gac aag   1255
    Met Asn Lys Arg Thr Gly Gln Pro Met Ile His Ile Tyr Leu Asp Lys
20      390             395             400

    gaa aca gga aag ccc aaa ggc gat gcc aca gtg tcc tat gaa gac cca   1303
    Glu Thr Gly Lys Pro Lys Gly Asp Ala Thr Val Ser Tyr Glu Asp Pro
    405             410             415             420
25
    ccc act gcc aag gct gcc gtg gaa tgg ttt gat ggg aaa gat ttt caa   1351
    Pro Thr Ala Lys Ala Ala Val Glu Trp Phe Asp Gly Lys Asp Phe Gln
                    425             430             435

30  ggg agc aaa ctt aaa gtc tcc ctt gct cgg aag aag cct cca atg aac   1399
    Gly Ser Lys Leu Lys Val Ser Leu Ala Arg Lys Lys Pro Pro Met Asn
                    440             445             450

    agt atg cgg ggt ggt ctg cca ccc cgt gag ggc aga ggc atg cca cca   1447
35  Ser Met Arg Gly Gly Leu Pro Pro Arg Glu Gly Arg Gly Met Pro Pro
                455             460             465

    cca ctc cgt gga ggt cca gga ggc cca gga ggt cct ggg gga ccc atg   1495
40  Pro Leu Arg Gly Gly Pro Gly Gly Pro Gly Gly Pro Gly Gly Pro Met
        470             475             480

    ggt cgc atg gga ggc cgt gga gga gat aga gga ggc ttc cct cca aga   1543
    Gly Arg Met Gly Gly Arg Gly Gly Asp Arg Gly Gly Phe Pro Pro Arg
45  485             490             495             500

    gga ccc cgg ggt tcc cga ggg aac ccc tct gga gga gga aac gtc cag   1591
    Gly Pro Arg Gly Ser Arg Gly Asn Pro Ser Gly Gly Gly Asn Val Gln
                    505             510             515
50
    cac cga gct gga gac tgg cag tgt ccc aat ccg ggt tgt gga aac cag   1639
    His Arg Ala Gly Asp Trp Gln Cys Pro Asn Pro Gly Cys Gly Asn Gln
                    520             525             530

55  aac ttc gcc tgg aga aca gag tgc aac cag tgt aag gcc cca aag cct   1687
    Asn Phe Ala Trp Arg Thr Glu Cys Asn Gln Cys Lys Ala Pro Lys Pro
                    535             540             545
```

```
gaa ggc ttc ctc ccg cca ccc ttt ccg ccc ccg ggt ggt gat cgt ggc    1735
Glu Gly Phe Leu Pro Pro Pro Phe Pro Pro Pro Gly Gly Asp Arg Gly
        550             555             560

aga ggt ggc cct ggt ggc atg cgg gga gga aga ggt ggc ctc atg gat    1783
Arg Gly Gly Pro Gly Gly Met Arg Gly Gly Arg Gly Gly Leu Met Asp
565             570             575             580

cgt ggt ggt ccc ggt gga atg ttc aga ggt ggc cgt ggt gga gac aga    1831
Arg Gly Gly Pro Gly Gly Met Phe Arg Gly Gly Arg Gly Gly Asp Arg
            585             590             595

ggt ggc ttc cgt ggt ggc cgg ggc atg gac cga ggt ggc ttt ggt gga    1879
Gly Gly Phe Arg Gly Gly Arg Gly Met Asp Arg Gly Gly Phe Gly Gly
            600             605             610

gga aga cga ggt ggc cct ggg ggg ccc cct gga cct ttg atg gaa cag    1927
Gly Arg Arg Gly Gly Pro Gly Gly Pro Pro Gly Pro Leu Met Glu Gln
        615             620             625

atg gga gga aga aga gga gga cgt gga gga cct gga aaa atg gat aaa    1975
Met Gly Gly Arg Arg Gly Gly Arg Gly Gly Pro Gly Lys Met Asp Lys
        630             635             640

ggc gag cac cgt cag gag cgc aga gat cgg ccc tac tagatgcaga        2021
Gly Glu His Arg Gln Glu Arg Arg Asp Arg Pro Tyr
645             650             655
```

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gaccccgcag agctgcattg actaccagat ttattttta aaccagaaaa tgttttaaat 2081

ttataattcc atatttataa tgttggccac aacattatga ttattccttg tctgtacttt 2141

agtattttc accatttgtg aagaaacatt aaaacaagtt aaatggtagt gtgcggagtt 2201

ttttttct t ccttctttta aaaatggttg tttaagactt taacaatggg aacccttgt 2261

gagcatgctc agtatcattg tggagaacca agagggcctc ttaactgtaa caatgttcat 2321

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<213> Homo sapiens

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Gly Tyr Ser Ala Tyr Thr Ala Gln Pro Thr Gln Gly Tyr Ala Gln Thr
        20              25              30
```

Thr Gln Ala Tyr Gly Gln Gln Ser Tyr Gly Thr Tyr Gly Gln Pro Thr
   35   40   45

Asp Val Ser Tyr Thr Gln Ala Gln Thr Thr Ala Thr Tyr Gly Gln Thr
5 50   55   60

Ala Tyr Ala Thr Ser Tyr Gly Gln Pro Pro Thr Gly Tyr Thr Thr Pro
  65   70   75   80

10 Thr Ala Pro Gln Ala Tyr Ser Gln Pro Val Gln Gly Tyr Gly Thr Gly
     85   90   95

Ala Tyr Asp Thr Thr Thr Ala Thr Val Thr Thr Thr Gln Ala Ser Tyr
    100   105   110

15
Ala Ala Gln Ser Ala Tyr Gly Thr Gln Pro Ala Tyr Pro Ala Tyr Gly
    115   120   125

Gln Gln Pro Ala Ala Thr Ala Pro Thr Arg Pro Gln Asp Gly Asn Lys
20 130   135   140

Pro Thr Glu Thr Ser Gln Pro Gln Ser Ser Thr Gly Gly Tyr Asn Gln
145   150   155   160

25 Pro Ser Leu Gly Tyr Gly Gln Ser Asn Tyr Ser Tyr Pro Gln Val Pro
     165   170   175

Gly Ser Tyr Pro Met Gln Pro Val Thr Ala Pro Pro Ser Tyr Pro Pro
    180   185   190

30
Thr Ser Tyr Ser Ser Thr Gln Pro Thr Ser Tyr Asp Gln Ser Ser Tyr
    195   200   205

Ser Gln Gln Asn Thr Tyr Gly Gln Pro Ser Ser Tyr Gly Gln Gln Ser
35 210   215   220

Ser Tyr Gly Gln Gln Ser Ser Tyr Gly Gln Gln Pro Pro Thr Ser Tyr
225   230   235   240

40 Pro Pro Gln Thr Gly Ser Tyr Ser Gln Ala Pro Ser Gln Tyr Ser Gln
     245   250   255

Gln Ser Ser Ser Tyr Gly Gln Gln Ser Ser Phe Arg Gln Asp His Pro
    260   265   270

45
Ser Ser Met Gly Val Tyr Gly Gln Glu Ser Gly Gly Phe Ser Gly Pro
    275   280   285

Gly Glu Asn Arg Ser Met Ser Gly Pro Asp Asn Arg Gly Arg Gly Arg
50 290   295   300

Gly Gly Phe Asp Arg Gly Gly Met Ser Arg Gly Gly Arg Gly Gly Gly
305   310   315   320

55 Arg Gly Gly Met Gly Ser Ala Gly Glu Arg Gly Gly Phe Asn Lys Pro
     325   330   335

Gly Gly Pro Met Asp Glu Gly Pro Asp Leu Asp Leu Gly Pro Pro Val
          340   345   350

Asp Pro Asp Glu Asp Ser Asp Asn Ser Ala Ile Tyr Val Gln Gly Leu
5   355   360   365

Asn Asp Ser Val Thr Leu Asp Asp Leu Ala Asp Phe Phe Lys Gln Cys
      370   375   380

10 Gly Val Val Lys Met Asn Lys Arg Thr Gly Gln Pro Met Ile His Ile
385   390   395   400

Tyr Leu Asp Lys Glu Thr Gly Lys Pro Lys Gly Asp Ala Thr Val Ser
             405   410   415
15

Tyr Glu Asp Pro Pro Thr Ala Lys Ala Ala Val Glu Trp Phe Asp Gly
          420   425   430

20 Lys Asp Phe Gln Gly Ser Lys Leu Lys Val Ser Leu Ala Arg Lys Lys
      435   440   445

Pro Pro Met Asn Ser Met Arg Gly Gly Leu Pro Pro Arg Glu Gly Arg
    450   455   460
25

Gly Met Pro Pro Pro Leu Arg Gly Gly Pro Gly Gly Pro Gly Gly Pro
465   470   475   480

Gly Gly Pro Met Gly Arg Met Gly Gly Arg Gly Gly Asp Arg Gly Gly
30   485   490   495

Phe Pro Pro Arg Gly Pro Arg Gly Ser Arg Gly Asn Pro Ser Gly Gly
        500   505   510

35 Gly Asn Val Gln His Arg Ala Gly Asp Trp Gln Cys Pro Asn Pro Gly
      515   520   525

Cys Gly Asn Gln Asn Phe Ala Trp Arg Thr Glu Cys Asn Gln Cys Lys
     530   535   540
40

Ala Pro Lys Pro Glu Gly Phe Leu Pro Pro Pro Phe Pro Pro Pro Gly
545   550   555   560

Gly Asp Arg Gly Arg Gly Gly Pro Gly Gly Met Arg Gly Gly Arg Gly
45   565   570   575

Gly Leu Met Asp Arg Gly Gly Pro Gly Gly Met Phe Arg Gly Gly Arg
          580   585   590

50 Gly Gly Asp Arg Gly Gly Phe Arg Gly Gly Arg Gly Met Asp Arg Gly
      595   600   605

Gly Phe Gly Gly Gly Arg Arg Gly Gly Pro Gly Gly Pro Pro Gly Pro
    610   615   620
55

Leu Met Glu Gln Met Gly Gly Arg Arg Gly Gly Arg Gly Gly Pro Gly
625   630   635   640

```
Lys Met Asp Lys Gly Glu His Arg Gln Glu Arg Arg Asp Arg Pro Tyr
                645                650                655
```

5

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10

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15

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20

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45

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50

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55